



CIRNAC Comments to NIRB

Re: Notice of Screening for Vermont State University's
“Interpretations of Polar Environments at the Nanoscale”
Project Proposal



Nunavut Regional Office
918 Sivumugiaq Street
Iqaluit, NU, X0A 3H0

Your file - Votre référence
25YN039
Our file - Notre référence
GCdocs# 136223305

May 12, 2025

Kelli Gillard PAg, CTAJ
Manager, Impact Assessment
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU, X0B 0C0
via NIRB public registry

Re: Notice of Screening for University of Alberta's "Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems" project proposal

Dear Kelli Gillard,

On May 2, 2025, the Nunavut Impact Review Board (NIRB) invited parties to comment on University of Alberta's "Assessing the ecological risk associated with critical mineral extraction and low-sulphur fuels in Northern ecosystems" project proposal. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) appreciates the opportunity to provide comments and offers the responses below as it pertains to the NIRB's request:

Whether the project proposal is of a type where the potential adverse effects are highly predictable and mitigable with known technology

CIRNAC #1: Best Management Practices

The proposed laboratory analytical processes will generate wastewater that may contain trace contaminants, such as heavy metals and Per- and polyfluoroalkyl substances. The Proponent has proposed to treat this wastewater using Chelex chelating resin and adsorptive media (activate charcoal) to remove contaminants before disposal. Though Chelex resin and activated carbon media for laboratory wastewater treatment is appropriate, CIRNAC notes it is important to that the treated effluent quality is monitored regularly, to confirm if the process remains effective prior to release in the CHARS sinks. The Proponent should incorporate the best management practices to mitigate any potential impacts in the proposed activities, some of which are to:

- Regularly monitor the quality of the treated wastewater to ensure that heavy metals and other contaminants are being effectively removed and that water quality meets the discharge criteria.



- Replace or regenerate the Chelex resin and charcoal at previously tested concentrations to maintain treatment efficiency.
- Ensure that any contaminants captured by resin and charcoal are properly contained.
- Store lithium-contaminated wastewater in sturdy, leak-proof containers that are clearly labeled and equipped with secondary containment.
- Store all chemicals in accordance with their hazard class and compatibility.
- Ensure that all personnel handling the spent resin and charcoal are trained in proper hazardous waste procedures and equipped with appropriate personal protective equipment.

Any matter of importance to the Party related to the project proposal

CIRNAC #2: Consultation with interested parties

CIRNAC recommends that the Proponent continue to consult with the Ekaluktutiak Hunters and Trappers Association, as well as the Municipality of Cambridge Bay and relevant organizations or individuals regarding its project proposal. As part of any consultation activities, several issues should be considered, including, but not limited to:

- Incorporation of Inuit Qauijimajatuqangit into project activities;
- Mitigation measures designed to prevent any disturbance to wildlife and the environment;
- The experience of community members who participate in traditional harvesting activities within or in close proximity to the project area;
- Mitigation measures designed to prevent disturbance to sites with cultural, archaeological, and/or environmental significance;
- Training and employment opportunities for Inuit and community members;
- Procurement opportunities for local and Inuit-owned businesses; and
- Regular updates on the status of project activities.

CIRNAC appreciates the opportunity to provide comments. Should you have any questions, please contact Muhammad Arslan by e-mail at muhammad.arslan@rcaanc-cirnac.gc.ca or David Abernethy by email at david.abernethy@canada.ca.

Sincerely,



Richard Bingley
Manager, Impact Assessment

